c. Amendments to Claims

1 – 5. (canceled)

6. (currently amended) A method of transmitting a stream of digital data values, comprising:

generating a stream of symbols by processing the digital data values with a partial response function defined by $[1+\sum^{K}_{i=1}Z^{-i}]$, the integer K being greater than one, the functions Z^{-i} delay the digital data values by the integer i times the period between successive ones of the digital data values, the stream of generated symbols having positive amplitude symbols and negative amplitude symbols; and

modulating [a] an optical carrier wave with the generated stream of symbols; and

wherein the modulating includes amplitude modulating the carrier wave with a non-return-to-zero waveform whose amplitude is sequentially defined by a sequence of the symbols; and

wherein the modulating includes phase shifting the carrier wave for ones of the symbols having amplitudes of one sign.

7 - 9. (canceled)

10. (original) The method of claim 6, wherein the integer K is odd.

11. (original) The method of claim 6, wherein the digital data values are data bits.

12. (currently amended) A transmitter of digital data, comprising:

a modulator having an input for [a] an optical carrier signal and an input for a first stream of symbols representative of digital data values, the modulator being configured to modulate the carrier signal with sequential values of symbols of a second stream, each symbol of the second stream being a sum of the present symbol of the first stream and the last K symbols of the first stream, the integer K being greater than one, the second stream having symbols of positive amplitude and of negative amplitude; and

wherein the modulator processes the symbols of the first stream with a partial response function defined by $[1+\Sigma^{K}_{i=1}Z^{-i}]$, the functions Z^{-i} delay symbols by the integer i times the period between successive ones of the input symbols; and

wherein the modulator modulates the carrier signal with a non-return-to-zero waveform whose amplitude is sequentially defined by the sequence of symbols in the second stream; and

wherein the modulator is configured to phase shift the optical carrier for symbols of the second stream with amplitudes of one sign.

13 - 32. (canceled)

33. (previously presented) The transmitter of claim 12, further comprising:

a precoder being configured to produce each symbol of the first stream from a corresponding input digital data bit, the precoder being configured to produce one of the symbols of the first stream by performing an exclusive OR of the input digital data bit corresponding to the one of the symbols and a bit value dependent on one or more of previous ones of the symbols of the first stream.

34. (new) The method of claim 10, wherein ones of the generated symbols have the amplitudes of a constellation whose lowest member is –(K+1)A/2 and whose highest member is +(K+1)A/2, the constellation's members being those numbers that both differ from the lowest member by a non-negative integer multiple of a selected positive number A and are not greater than the highest member.

35. (new) the method of claim 6, wherein the phase shifting generates a phase shift of 180°.

36. (new) The method of claim 12, wherein ones of the symbols of the second stream have the amplitudes of a constellation whose lowest member is –(K+1)A/2 and whose highest member is +(K+1)A/2, the constellation's members being those numbers

that both differ from the lowest member by a non-negative integer multiple of a selected positive number A and are not greater than the highest member.

37. (new) The method of claim 36, wherein the integer K is odd.

38. (new) The method of claim 12, wherein the integer K is odd.

39. (new) the method of claim 6, wherein the phase shifting generates a phase shift of 180°.